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POLICY ANALYSIS

The Eurozone Debt Crisis: Causes and Policy Recommendations

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January 31, 2020

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Executive summary

- During the first decade of its existence, the Eurozone demonstrated a high level of economic growth (2.67% annually on average), performing relatively better than other large OECD economies. However, triggered externally, the European debt crisis challenged the currency union and tested its resilience.
- Comparative political economy explains **the fundamental roots of the European crisis** in varieties of national institutional structures of member countries (north vs. south), which conditioned their asymmetric development trends over time and made the union susceptible to external shocks. Imperfections in the Eurozone's governance construction to react effectively exacerbated macroeconomic divergence.
- Increasing discrepancies were reflected in current account imbalances, inflation rates, and divergence in price competitiveness of output. Inability to devalue to restore the loss of competitiveness of the south countries, the absence of mechanisms to regulate divergence through flexible wages and fiscal transfers limited the room for manoeuvre.
- **Policy options** are worked out to reduce macroeconomic imbalances, to make the union's authorities effective in the case of possible financial and economic strains in the future, and most importantly to harmonise different political-economic institutional settings of the north and south European economies to promote growth and sustainability of the union.
- Due to growing popularity of right-wing nationalist parties on the political arena of many European countries (Germany, France, Italy, Spain, Finland, the Netherlands), establishing a fiscal union which would provide the opportunity to use budget transfers between member states is the least feasible policy option among alternatives at the current stage.
- **A set of recommended measures** includes:
 - *in the short run* – balanced fiscal consolidation, complemented by measures to support growth in the south with the opportunity to spread austerity conditions over a longer period;

- *in the medium term* – banking centralisation to prevent possible bank runs, and to secure the trust of investors in sovereign government solvency;
 - *in the long run* – structural reforms focused on promoting labour market mobility and wage flexibility, restoring the south economies' competitiveness by increasing their productivity, developing institutional capacities for innovations, technologies, education, R&D, etc.
- This recommendation is justified by recent studies showing that the northern export-driven economies, especially Germany, benefited most from the introduction of the single European currency (estimated at €1,893 billion for 1999-2017), while southern demand-driven economies were not successful in the Eurozone (they caused a total loss of €6,392 billion).
 - It is expected that Germany, as a major actor in the Eurozone would not be interested in changing the current growth model due to internal political reasons (main constituency of the two largest parties in the country is export-oriented companies). To this end, the **success of reforms** to build an effective and sustainable currency union very much depends on the European authorities' political and diplomatic efforts to properly communicate the necessity of transformation to member states, constantly challenging their self-interested policy preferences.
 - If suggested reforms are not implemented, **vulnerability** of the Eurozone to sudden changes in market sentiment will remain, leading to a high risk of the break-up of the union with high economic and social costs, which is not beneficial to all members.

1. Introduction

Since its creation the single European currency union has demonstrated steady economic growth, outperforming on average the European Union's 28 countries and other large OECD economies (USA, UK, and Japan). However, the global financial crisis of 2007-2008 hit the Eurozone, in particular having severely affected Greece, Ireland, Italy, Portugal, and Spain. This resulted in an economic crisis.

Drawing on recent comparative political economic (CPE) research, this policy analysis argues that the fundamental roots of the European debt crisis are located in the following three constraints:

- i. varieties of political-economic institutional arrangements of member states;
- ii. the lack of fundamental mechanisms necessary to adjust diverging performance among member economies;
- iii. the Eurozone's imperfect governance structure and different political agendas of member countries.

The interplay of these constraints stipulated the Eurozone's exposure to negative external shocks, which European authorities struggled to cope with.

The structure of the policy analysis is as follows. First, Section 2 analyses economic tendencies among the Eurozone's member states over the period 1998-2008, and reveals the causes of the crisis based on optimal currency area (OCA) and varieties of capitalism (VOC) frameworks. Section 3 is focused on policy options to address the issues emphasized in the previous section. Section 4 then discusses side-effects and barriers to the implementation of policy recommendations. Lastly, Section 5 concludes with final recommendations and provides justifications.

2. Analysis of the problem

The theory of optimal currency areas

The theory of optimal currency areas, OCA (McKinnon, 1963; Mundell, 1961; Mundell & Swoboda, 1969) put forward the three conditions which have to be met for a stable monetary union:

- 1) No economic divergence in member economies;

- 2) Flexible labour and goods markets, as well as mobility of workers between participant countries;
- 3) Budget centralisation for fiscal transfers between member states.

Condition 1 implies that changes in competitiveness between member economies should be limited to avoid possible imbalances. Condition 2 explains how under a monetary union macroeconomic divergence can be restored by flexible wage and price adjustment and effective labour distribution. Condition 3 requires a budgetary union among member states, which allows income transfers from members in good economic condition to members having financial or economic troubles (Paul De Grauwe, 2013; Mundell & Swoboda, 1969).

In 1992, when the Maastricht Treaty was signed, European economies were not well coordinated, the common labour market was not flexible enough (e.g., compared to the US market), and the European Union's budget had not enough funds for possible fiscal transfers: the budget was less than 1 percent of the union's total GDP vs. up to 20 percent in the United States (Iversen et al., 2016). Thus, at the stage of monetary union creation OCA conditions were not satisfied due to the prevalence of politics over economics that put the member states under a high risk (Paul De Grauwe, 2013) due to the absence of mechanisms for adjustments (Krugman, 2013).

However, even though OCA-based explanations of the Eurozone crisis are mainstream in economics (Schelkle, 2017), they do not capture the comparative political-economic aspects of institutional differences among member states from a CPE perspective, which explain the root causes of the European debt crisis.

The varieties of capitalism framework

According to recently developed varieties of capitalism (VOC) framework, the two groups of countries in the Eurozone can be identified as: Germany, Austria, Belgium, Finland, and the Netherlands, which are described as coordinated market economies (Hall & Soskice, 2001) or European 'north'; and such economies as France, Portugal, Ireland, Italy, Greece, and Spain, which are named 'peripheral' economies or European 'south' (Iversen et al., 2016). The features of these two groups are distinguished in Table 1.

Table 1. Eurozone members from VOC perspective

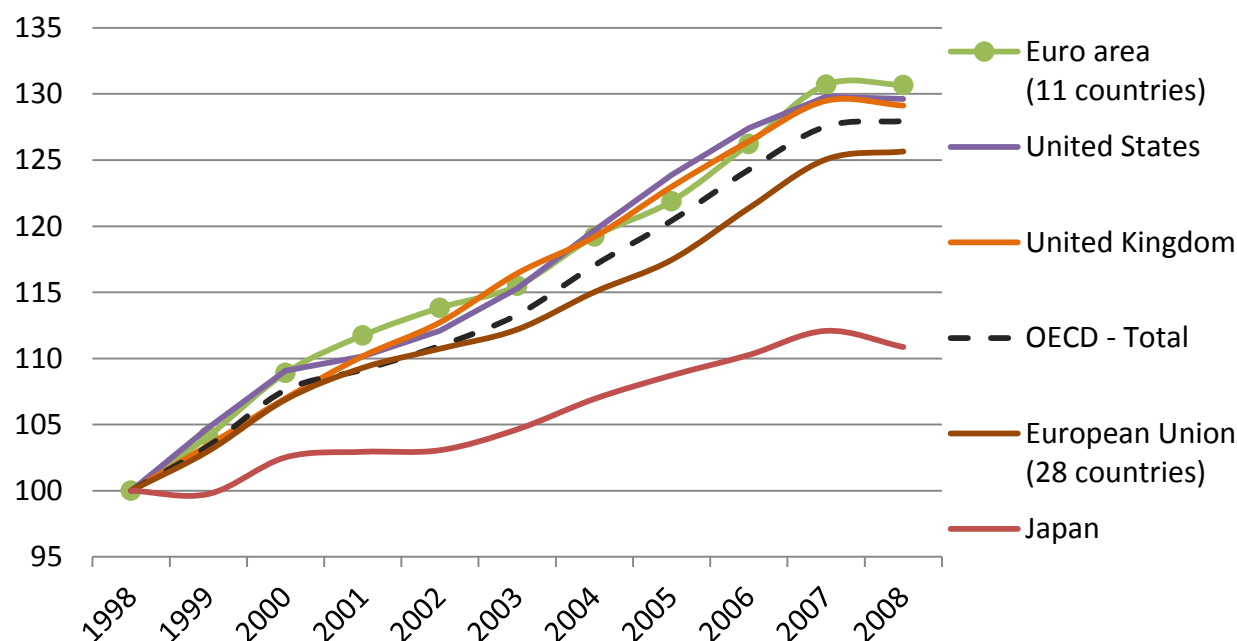
Characteristics	European north	European south and periphery
1. VOC classification	Coordinated market economies (CMEs)	Liberal market economies and mixed market economies
2. Economic model	Export-oriented	Demand-led
3. Main interest in the common currency	A stable exchange rate regime to promote exports	Low inflation rates, stimulating investments
4. Labour market flexibility	Coordinated bargaining, and consequently restrained wage growth	Union fragmentation, and as a result little capacity for wage restraint
5. Macroeconomic policy preference	Tight fiscal and monetary policy	Expansionary monetary policy

Source: Adapted from Iversen et al. (2016)

Since the introduction of the Euro currency in 1999 till the emergence of the world financial crisis, in 2007-2008, both groups of economies have benefited from the union: CMEs – from a stable exchange rate regime that promoted exports without the necessity to devalue the currency, southern economies – from low inflation rates, provided by the Maastricht entry requirements that stimulated investments.

The two complementary economic models have led to successful macroeconomic outcomes in the single currency area, despite the absence of OCA conditions (Iversen et al., 2016): over the period 1999-2008, the eleven economies performed relatively well in terms of GDP growth (2.67% on average), and outpaced other large OECD economies – the USA (2.64%), the UK (2.59%), Japan (1.04%), OECD total (2.50%), and the EU's 28 countries (2.31%) average growth (Diagram 1).

Diagram 1. Economic performance of the Euro area and other OECD countries, indexed real GDP growth (1998=100)

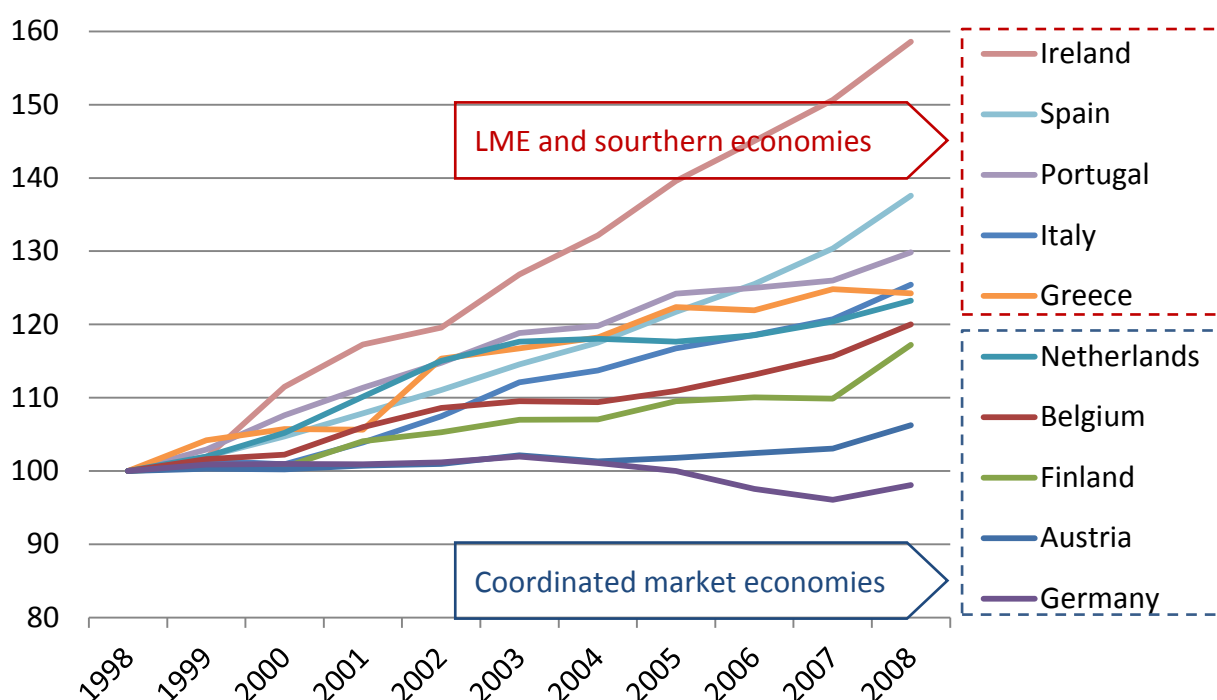


Source: Own calculations using OECD data (<https://stats.oecd.org>)

However, a hidden problem associated with different political-economic structures of member states eventually made itself known in macroeconomic divergence between the north and south economies. Imbalances can be seen in terms of changes in price competitiveness of products expressed by unit labour costs across the Eurozone countries (Diagram 2).

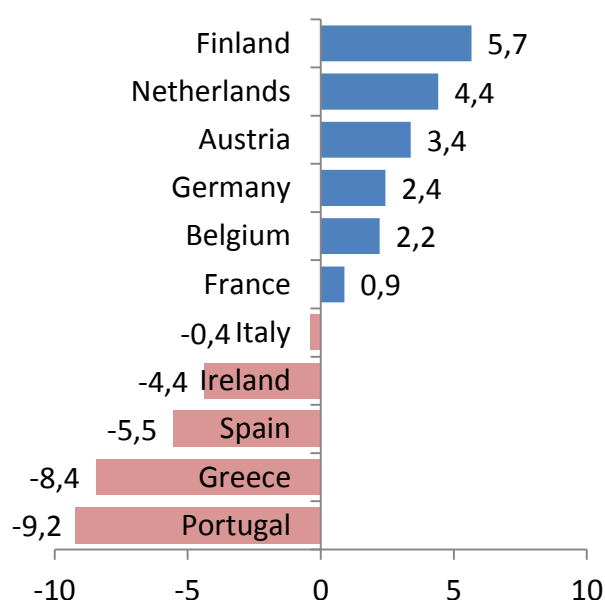
Institutional framework with coordinated bargaining allowed CMEs, especially Germany and Austria, to effectively hold down labour costs and benefit from export-driven growth strategy within the currency union (Hall, 2014; Moschella, 2014; Muellbauer, 2013). Meanwhile, LME and southern economies, particularly Ireland, Spain and Portugal, tied by the single monetary union and inflexible exchange rate regime, have significantly lost in the competitiveness of their output (by 30-60% over 1998-2008) and were unable to devalue the currency to offset the inflationary pressure from demand-driven growth. Overall, southern countries' institutional structure characterised by weak unions was not appropriate to be economically successful in the Eurozone compared to CMEs (Hall, 2012).

Diagram 2. Unit labour cost index in Eurozone countries (1998=100)



Source: Own calculations using OECD data (<https://stats.oecd.org>)

Diagram 3. Current account balance as % of GDP, average for 1998-2008



Source: Own calculations using World Bank data (<https://data.worldbank.org>)

Increasing macroeconomic asymmetries were expressed also in current account balances (Diagram 3) and inflation rate discrepancies among member economies. For instance, the introduction of the euro currency has made Austria better-off in terms of its current account balance, while Greece, Italy and Spain's current account positions significantly deteriorated (Hope, 2016).

At the same time, without a flexible exchange rate regime, inflation divergence was inevitable and permanent process, intensified by different monetary policies (tight vs. expansionary), that made the union eventually unstable (Wyplosz, 2016).

The interaction of constraints

We have seen that two theories – OCA and VOC – set constraints for the effective functioning of the monetary and currency union. In our view, these two theories are complementary. To be clear, if VOC explains the root causes of the crisis in Europe lying in the varieties of national institutional set-ups of member states that reinforced their macroeconomic divergence (*the first constraint*), OCA describes mechanisms which could be used to adjust this divergence (*the second constraint*).

However, none of these mechanisms have been in place in the European currency union. Inability to devalue, flexible wages could have helped to adjust the loss of competitiveness in the southern European mixed-market economies (the OCA condition 2), which requires some move towards more flexible LME-type wage-setting system (Hall & Soskice, 2001). Alternatively had the monetary union been embedded in a fiscal union, it would have used income transfers between member states to reduce macroeconomic imbalances and provide a buffer against asymmetric shocks (the OCA condition 3).

The Eurozone's imperfect power structure (Begg, 1998), the conflict of interests (Hall, 2014) due to having different internal agendas of political leaders in member states aggravated the problem, have made it difficult for decision makers to take effective and operative anti-crisis management decisions (*the third constraint*).

As a result, the interplay of these described constraints conditioned the transformation of external shock into an inimical mixture of financial, sovereign debt, and economic crises in the Eurozone. The current account deficits in south European countries as indicators of foreign capital inflows to finance internal consumption-driven growth translated into unsustainable external debt and actually led to a classical balance of payments crisis (Krugman, 2012b; O'Brien, 2013). Due to government bailouts of afflicted financial institutions, external (initially mostly private) debt eventually transformed into sovereign debt crisis (McKinsey Germany, 2012), while macroeconomic imbalances and a lack of adjustment mechanisms created pressure on the labour market and pushed member states into recessions, which in turn further worsened public debts and deficits and contributed to financial instability (Blundell-Wignall, 2012; Paul De Grauwe, 2013).

Having understood the causes of the crisis, we can now turn to considering policy options.

3. Policy options

Based on our analysis, there are three key policy issues that have to be addressed:

- 1) What measures are needed in the short-term to reduce macroeconomic imbalances in the Eurozone countries;
- 2) What should be done in the mid-term to make the union's bodies effective in the case of possible economic tensions in the future;
- 3) How to harmonise different political-economic institutional set-ups of the north and south European economies to promote economic growth and make the currency union sustainable in the long run.

Some of these issues were considered to a greater or lesser degree (Appendix 1). Although the European authorities have taken a set of measures, which helped to regain the trust of markets (as seen in Appendix 2), important institutional and structural reforms are yet to be realised.

Therefore, to address the above mentioned policy issues, the following policy options should be considered.

Short-term measures

Stable and effective functioning of the currency union depends on both the European Commission and the European Central Bank' (ECB) actions. Given their acknowledged efficiencies (Fuertes et al., 2015), such current mechanisms as the Outright Money Transaction (OMT) and The European Stability Mechanism (ESM) should be implemented onwards.

To improve balance of payments in countries with large current account deficits (e.g. Portugal, Greece, Spain, Ireland), further fiscal consolidation is inevitable. However, this policy option could lead to suppressed demand growth and is tied to a risk of recession, as will be explained in Section 4. Therefore, the European Commission should consider the opportunity to spread austerity requirements over a longer period (Paul De Grauwe, 2013) with the gradual convergence to 'fiscal compact' rules (Blundell-Wignall, 2012), overall pursuing, which may be referred to as 'balanced' fiscal consolidation policy.

More bank centralisation

The ECB should play more active role as a lender of last resort for all member countries in both banking and government bonds markets. Even though the ECB already acts in the sovereign bond markets through OMT, it is important to officially set up his status of a lender of last resort. It would bring a strong psychological effect to markets securing the confidence of investors in sovereign government solvency and prevent possible bank runs in times of turmoil (Paul De Grauwe, 2013; Iversen et al., 2016; Wyplosz, 2011).²

Taking into account that bank liabilities in member states are much larger than their economies – from around 180% of GDP in Italy and Spain to more than 600% of GDP in Ireland – national central banks are, a priori, not able to compete with the ECB, which has access to actually unlimited amounts of euro cash. The European Stability Mechanism (ESM) definitely helped to quiet markets down, however due to its capped funds (at around €700 billion)³, it also cannot substitute for the ECB (De Grauwe, 2011).

Establishing a fiscal union

A sustainable monetary union should go along with a fiscal union, which includes a higher degree of economic governance, centralised tax, redistributive power, and enlarged regular budget for fiscal transfers to satisfy the OCA condition (Paul De Grauwe, 2013). A historical analysis shows that all solid monetary unions have had a mechanism of transfer payments to compensate for regional disproportions and imbalances (McKinsey Germany, 2012).

Moreover, when it comes to coordinate the ECB's interest rate policy with fiscal policy, interaction with a single budget authority instead of 19 authorities could significantly reduce transactions costs (Begg, 1998).

Structural reforms

The Eurozone member states must adopt structural reforms, aimed at promoting labour market mobility and wage flexibility, restoring the south's economies' competitiveness by increasing their productivity (this policy option is supported by

² As of today, the role of lender of last resort (LLR) is actually taken by 19 member national central banks through providing emergency liquidity assistance (ELA), while the ECB is responsible for checking and monitoring the national central banks LLR activities (see "What is a lender," 2019).

³ Data source: European Stability Mechanism, 2019.

many research, e.g., Blanchard, 2015; Blundell-Wignall, 2012; Hall, 2018; Johnston et al., 2014; McKinsey Germany, 2012; OECD, 2009; Wyplosz, 2016).

At the same time, it is vital to keep in mind that just putting emphasis on emulating LME's wage-setting system to CMEs and mixed-market economies will not work. Therefore, apart from wage issues, structural reforms should be focused on developing capacities for innovations, technologies, education, R&D, etc., i.e. all institutional subsystems, crucial for firms' success (Hall, 2018). In economies of the south special attention should be given to creating less labour-intensive industries to avoid price competition pressure from emerging low-cost countries (such as China) via an exchange rate channel (Hall, 2018; McKinsey Germany, 2012), and providing a smooth transition of workers from old unsustainable industries to new ones based on the so-called Nordic-style 'flexicurity' market model (Schubert & Martens, 2005).

It should be acknowledged, that this policy option is not novelty: it was on the political agenda of the European authorities and member countries.⁴ However, structural reforms were not properly addressed so far, especially in Greece (Blanchard, 2015), which suffered most from the crisis.

4. Possible side-effects and barriers

The implementation of the policy option associated with the ECB's more active role as a lender of last resort has two potential side-effects. First, it has been said that when the ECB buys bonds it blows up the money base that increases a risk of inflation. Nevertheless, there is empirical evidence that during financial and economic crises this risk is minimal thanks to money supply not growing in pace with money base, since banks and people do not actively spend money; in actuality, there could be even deflationary pressure (De Grauwe, 2011; Friedman & Schwartz, 1961).

The other side-effect relates to a moral hazard issue when the presence of a large lender of last resort could incentivise national governments to issue too much debt. However, this problem can be addressed by imposing fiscal rules to member states' governments (De Grauwe, 2011). In addition, there is possible institutional barrier to

⁴ E.g., structural reforms were put forward within assistance programmes (Wyplosz, 2016). The German government executed the so-called 'Agenda 2010' programme in their country, focused on labour market and welfare system reforms to boost productivity growth (McKinsey Germany, 2012).

any changes in the status of the ECB. This needs amendment of the EU Treaty, which is difficult to realize as it would require approval from all member states. Yet, P. De Grauwe (2013) claims that currently stipulated in the Treaty ECB's right to 'operate in financial markets by buying and selling marketable instruments' might be enough for a formal role as a lender of last resort.

The policy option of creating a fiscal union faces political barriers, as it means less sovereignty for its members, which is unlikely in the current political trends in European countries (Wyplosz, 2015). The fear to lose sovereignty was well seen in the UK's Brexit case, while in Eurozone countries we see trend towards nationalism with a growing popularity of far-right-wing parties: Eurosceptical Alternative for Germany, National Rally in France, Freedom Party in the Netherlands, The Finns in Finland, Vox in Spain, and The League in Italy ("Europe and right-wing nationalism," 2019).

When implementing structural reforms capable to improve competitiveness via liberalisation, political difficulties should be taken into account as well (Blundell-Wignall, 2012). A key player in the union – Germany – that benefited most from the current growth model (Gasparotti & Kullas, 2019; Hall, 2012) would not be interested in changing a status-quo in the face of possible opposition from employers in the export sector, major constituents of the two largest parties in the country (Hall, 2018). However, political will and precedents of such reforms make this policy option quite plausible.

Lastly, the policy measure on fiscal consolidation, which does not favour demand-driven economies (Hall, 2018), is associated with potential social unrest and public backlash, what we have seen, for example, in Greece ("Greece crisis: Revolution," 2011). Besides, within this policy option, negative growth impact should be expected, which in turn could lead to recession, escalate banking problems and eventually undermine the benefits from fiscal adjustment (Blundell-Wignall, 2012). Some economists, such as Nobel laureate Paul Krugman, argue that austerity is not viable at all for the deeply depressed economies like Greece due to deterioration of real public spending. Of course, fiscal consolidation ensures export-led growth in CMEs, especially Germany (Iversen et al., 2016), at the expense of southern European economies suffering from slower economic growth due to a negative demand shock (Krugman, 2012a). Therefore, the European Commission should make efforts to find an equitable trade-off between economic interests of the Eurozone member states.

5. Recommendation and justifications

There are no a panacea or magic wand to guarantee the strong Eurozone against future crises. Instead a successful strategy depends on a combination of measures suggested in Section 3.

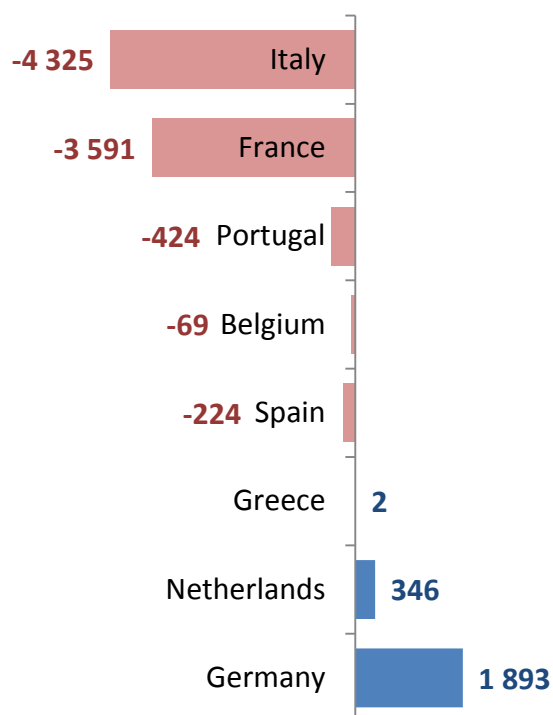
An additional, but extreme alternative would be for the southern mixed market economies to voluntarily exit the euro area. This would allow them to exploit the exchange rate (depreciation) to adjust their competitiveness. However, such an option is, though possible, not expedient to all member states (Hall, 2014), since it is associated with very high economic and social costs for them due to possible fall in living standards (Iversen et al., 2016) and financial struggles in the south, and currency appreciation and loss of competitiveness in the north economies (McKinsey Germany, 2012), and finally because of some 'symbolism' in the Eurozone membership (Hall, 2014).

Therefore, given the barriers to implementation, discussed in the previous section, our recommendation would be to take short-term measures on balanced fiscal consolidation, focus on banking centralisation in the medium term, and stick to structural reforms in the long run. This is a challenging task, but these measures are more realistic and doable compared to a fiscal unification, and unavoidable on the path of developing a strong union. Notably, without structural reforms, the Eurozone will always be vulnerable to possible future banking and sovereign debt crises, and ultimately to inevitable breakdown (Blundell-Wignall, 2012; McKinsey Germany, 2012).

Finally, additional justification for the necessity to implement our recommendation can be seen through the latest estimations of economic effects from the creation of the Eurozone, which proves that the common currency area benefited mainly Germany, but not southern and peripheral European economies. As Diagrams 4-5 below show, sticking to the current growth model without institutional changes has led to net economic losses (in terms of per-capita GDP) for eight analysed states in the amount of €6,392 billion accumulated for the period 1999-2017 (Gasparotti & Kullas, 2019), as total economic losses in Italy, France, Portugal, Spain, Greece, and even Belgium exceeded economic benefits for Germany and the Netherlands.⁵

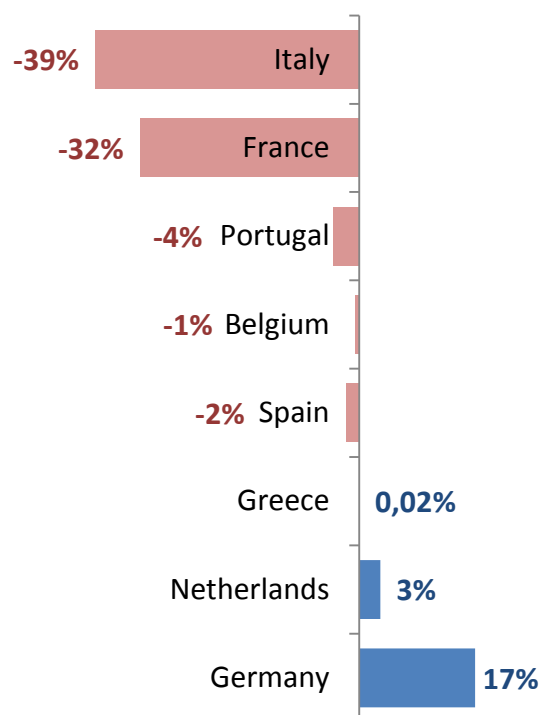
⁵ In their analysis Gasparotti & Kullas (2019) used the synthetic control method to estimate the deviation of actual per-capita GDP for analysed member countries vs. the counterfactual one, had the countries not joined the euro area.

Diagram 4. Economic benefit/loss from euro for member states, in € billion, for 1999-2017



Source: Own visualisation using Gasparotti & Kullas's (2019) estimations

Diagram 5. Economic benefit/loss from euro for member states, in % of Eurozone's GDP in 2017



Source: Own calculations using Gasparotti & Kullas's (2019) estimations and data on Eurozone's GDP (<https://data.worldbank.org>) and EUR/USD exchange rate (<https://www.ecb.europa.eu/stats/>)

Thus, to make the recommended strategy feasible, the European Commission using evidence-based research should convince southern economies to implement structural reforms and continue fiscal consolidation, and northern countries to reconsider a growth model within the Eurozone, while CME governments (especially German) should effectively communicate the benefits of the new strategy to their electorate.

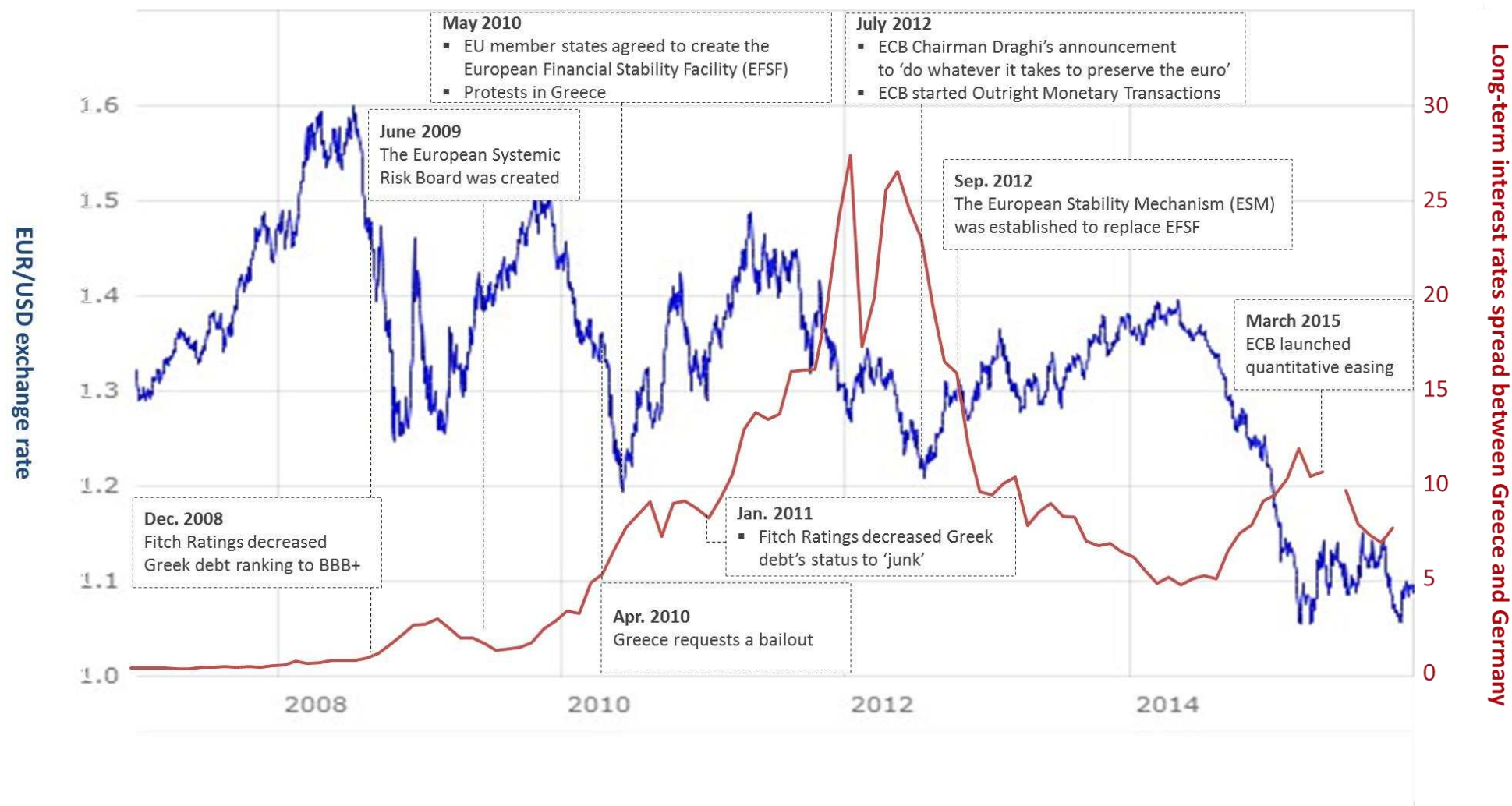
Appendices

Appendix 1. Implemented anti-crisis measures and their description

Main measures	Amount	Brief description
1. Financial assistance		
1.1. The European Financial Stabilization Mechanism (EFSM)	Up to €60 billion	The European Commission's emergency programme, financed by issuing bonds in capital markets
1.2. The European Financial Stability Facility (EFSF)	€440 billion (lending capacity)	A temporary emergency programme, financed by issuing bonds that are guaranteed by the member countries represented in the Economic and Financial Affairs Council
1.3. The European Stability Mechanism (ESM)	€700 billion	A permanent intergovernmental financial institution as a successor to the EFSF, which can buy sovereign debt in both primary and secondary markets
1.4. Bailout programmes to Greece, Spain, Ireland, and Portugal	~€625 billion	These countries received assistance through different schemes, including EFSM, EFSF, ESM, as well as IMF loans
2. Banking supervision		
2.1. The European Systemic Risk Board (ESRB)	-	Oversees the financial system and financial markets of the European Union to mitigate and prevent systemic risks
2.2. The Single Supervisory Mechanism (SSM)	-	The European system of banking supervision, which consists of the ECB and national supervisory authorities of the participating countries
3. Monetary measures		
3.1. Outright Monetary Transactions (OMT)	Unlimited	The ECB's fully-sterilised programme on buying short-term government bonds in secondary markets under certain conditions
3.2. Quantitative easing (QE)	€2.6 trillion euros	Non-standard monetary policy measures aimed at buying assets from commercial banks to boost economic growth

Source: Carvalho et al., 2018; ECB website; European Stability Mechanism, 2019; Schelkle, 2017

Appendix 2. Eurozone debt crisis and measures timeline



Source: Own visualisation based on ECB data on exchange rates (<https://www.ecb.europa.eu/stats/>); "Europe debt crisis timeline," 2011; Lamborelle (2016); OECD data on interest rates (<https://stats.oecd.org/>)

Bibliography

- Begg, D. (Ed.). (1998). *The ECB: Safe at any speed?* CEPR.
- Blanchard, O. (2015). Greece: Past critiques and the path forward. *VOX: CEPR Policy Portal*, 10 July.
- Blundell-Wignall, A. (2012). Solving the Financial and Sovereign Debt Crisis in Europe. *OECD Journal: Financial Market Trends*, 2011(2), 201–224. <https://doi.org/10.1787/fmt-2011-5k9cswmzsdwj>.
- Carvalho, R., Ranasinghe, D., & Wilkes, T. (2018, December 12). The life and times of ECB quantitative easing, 2015-18. *Reuters*. Retrieved from <https://www.reuters.com/article/us-eurozone-ecb-qe/the-life-and-times-of-ecb-quantitative-easing-2015-18-idUSKBN1OB1SM>.
- De Grauwe, P. (2011). The European Central Bank as a lender of last resort. *VOX: CEPR Policy Portal*, 18 August.
- De Grauwe, P. (2013). The European Central Bank as Lender of Last Resort in the Government Bond Markets. *CESifo Economic Studies*, 59(3), 520–535. <https://doi.org/10.1093/cesifo/ift012>.
- De Grauwe, Paul. (2013). The Political Economy of the Euro. *Annual Review of Political Science*, 16(1), 153–170. <https://doi.org/10.1146/annurev-polisci-060911-085923>.
- Europe and right-wing nationalism: A country-by-country guide. (2019, November 13). *BBC*. Retrieved from <https://www.bbc.co.uk/news/world-europe-36130006>.
- Europe debt crisis timeline: Key events from 2009-2011. (2011, June 21). Retrieved from <https://blogs.thomsonreuters.com/answerson/euro-zone-debt-crisis-timeline-graphic-day/>.
- European Stability Mechanism. (2019). *Safeguarding the euro in times of crisis: the inside story of the ESM*. Retrieved from <https://www.esm.europa.eu/sites/default/files/safeguarding-euro-times-crisis-inside-story-esm.pdf>.
- Friedman, M., & Schwartz, A.J. (1961). *A Monetary History of the United States 1867-1960*. Princeton University Press.

- Fuertes, A., Kalotychou, E., & Orkun, S. (2015). How did the ECB save the Eurozone without spending a single euro? *VOX: CEPR Policy Portal*, 26 March.
- Gasparotti, A., & Kullas, M. (2019). *20 Years of the Euro: Winners and Losers. An empirical study*. (CEP Study). Retrieved from Centre for European Policy website: https://www.cep.eu/Studien/20_Jahre_Euro_-_Gewinner_und_Verlierer/cepStudy_20_years_Euro_-_Winners_and_Losers.pdf.
- Greece crisis: Revolution in the offing? (2011, June 19). *BBC*. Retrieved from <https://www.bbc.co.uk/news/world-europe-13830466>.
- Hall, P. A. (2012). The Economics and Politics of the Euro Crisis. *German Politics*, 21(4), 355–371. <https://doi.org/10.1080/09644008.2012.739614>.
- Hall, P. A. (2014). Varieties of Capitalism and the Euro Crisis. *West European Politics*, 37(6), 1223–1243. <https://doi.org/10.1080/01402382.2014.929352>.
- Hall, P. A. (2018). Varieties of capitalism in light of the euro crisis. *Journal of European Public Policy*, 25(1), 7–30. <https://doi.org/10.1080/13501763.2017.1310278>.
- Hall, P. A., & Soskice, D. W. (Eds.). (2001). *Varieties of capitalism: The institutional foundations of comparative advantage*. Oxford University Press.
- Hope, D. (2016). Estimating the effect of the EMU on current account balances: A synthetic control approach. *European Journal of Political Economy*, 44, 20–40. <https://doi.org/10.1016/j.ejpoleco.2016.05.002>.
- Iversen, T., Soskice, D., & Hope, D. (2016). The Eurozone and Political Economic Institutions. *Annual Review of Political Science*, 19(1), 163–185. <https://doi.org/10.1146/annurev-polisci-022615-113243>.
- Johnston, A., Hancké, B., & Pant, S. (2014). Comparative Institutional Advantage in the European Sovereign Debt Crisis. *Comparative Political Studies*, 47(13), 1771–1800. <https://doi.org/10.1177/0010414013516917>.
- Krugman, P. (2012a, February 6). The Greek Vise. [Blog post]. Retrieved from <https://krugman.blogs.nytimes.com/2012/02/06/the-greek-vise/>.

- Krugman, P. (2012b, February 25). European Crisis Realities [Blog post]. Retrieved from <https://krugman.blogs.nytimes.com/2012/02/25/european-crisis-realities/>.
- Krugman, P. (2013). Revenge of the Optimum Currency Area. *NBER Macroeconomics Annual*, 27(1), 439–448. <https://doi.org/10.1086/669188>.
- Lamborelle, A., Valero, J. & Álvarez, L.F., (2016, May 25). Timeline of a crisis: Europe's economic strategy from 2008 to today. *EURACTIVE*. Retrieved from <https://www.euractiv.com/section/euro-finance/infographic/timeline-of-a-crisis-europes-economic-strategy-from-2008-to-today/>.
- McKinnon, R. I. (1963). Optimum Currency Areas. *The American Economic Review*, 53(4), 717–725.
- McKinsey Germany (2012). *The Future of the Euro*. Dusseldorf: McKinsey & Co.
- Moschella, M. (2014). Monitoring Macroeconomic Imbalances: Is EU Surveillance More Effective than IMF Surveillance?: Monitoring macroeconomic imbalances. *JCMS: Journal of Common Market Studies*, 52(6), 1273–1289. <https://doi.org/10.1111/jcms.12136>.
- Muellbauer, J. (2013). Conditional eurobonds and the eurozone sovereign debt crisis. *Oxford Review of Economic Policy*, 29(3), 610–645. <https://doi.org/10.1093/oxrep/grt032>.
- Mundell, R. A. (1961). A Theory of Optimum Currency Areas. *The American Economic Review*, 51(4), 657–665.
- Mundell, R. A., & Swoboda, A. K. (Eds.). (1969). *Monetary problems of the international economy: Papers and discussions*. University of Chicago Press.
- OECD. (2009). *The Financial Crisis: Reform and Exit Strategies*. OECD. <https://doi.org/10.1787/9789264073036-en>.
- O'Brien, M. (2013, March 7). No, the United States Will Never, Ever Turn Into Greece. *The Atlantic*. Retrieved from <https://www.theatlantic.com/business/archive/2013/03/no-the-united-states-will-never-ever-turn-into-greece/273748/>.
- Schelkle, W. (2017). *The political economy of monetary solidarity: Understanding the Euro experiment* (First edition). Oxford University Press.

Schubert, C.B., & Martens, H. (2005). *The Nordic model: A recipe for European success?* (EPC Working Paper No. 20). Retrieved from European Policy Centre website: <https://www.files.ethz.ch/isn/13888/>.

What is a lender of last resort? (2019, August 26). Retrieved from <https://www.ecb.europa.eu/explainers/tell-me-more/html/what-is-a-lender-of-last-resort.en.html>.

Wyplosz, C. (2011). They still don't get it. *VOX: CEPR Policy Portal*, 22 August, updated 25 October.

Wyplosz, C. (2015). The Eurozone crisis: Too few lessons learned. *VOX: CEPR Policy Portal*, 7 September.

Wyplosz, C. (2016). The six flaws of the Eurozone. *Economic Policy*, 31(87), 559–606. <https://doi.org/10.1093/epolic/eiw008>.